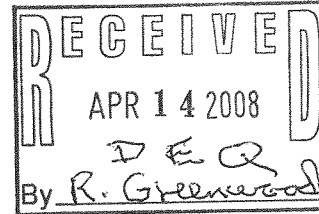


ORIGINAL DE/AFS/SF

Nonpareil Corporation
40 N. 400 W. Groveland
Blackfoot, ID 83221

April 14, 2008



Mr. Bill Rogers
Department of Environmental Quality
Air Quality Division
Stationary Source Program
1410 North Hilton
Boise, Idaho 83706-1255

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APR 14 2008

DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE A Q PROGRAM

**Re: Request for Pre-Permit Construction Approval Application
Nonpareil Corporation**

Dear Mr. Rogers:

Enclosed is a pre-permit construction approval application addressing Nonpareil Corporation's (Nonpareil) proposal to construct a new east processing boiler, at their existing facility in Blackfoot, Idaho. Nonpareil is requesting DEQ process this application in accordance with the 15-day pre-permit construction approval process contained in IDAPA 58.01.01.213. As required in IDAPA 58.01.01.213.01a., the permit to construct application is being submitted concurrently with this pre-permit construction request.

The enclosed pre-permit construction approval application has been prepared in accordance with DEQ's January 2001 guidance document "Pre-permit Construction Approval Guidance Document." On March 17, 2008 Nonpareil and JBR Environmental Consultants, Inc. held a meeting with DEQ to discuss that a request for pre-permit construction approval would be forthcoming. Also, in accordance with the requirements for a 15-day pre-permit construction approval, Nonpareil has advertised in the Blackfoot Morning News on April 11, 2008 an invitation to attend a public information meeting to be held at the Best Western Inn in Blackfoot, Idaho on April 23, 2008 at 12:00 pm.

This project meets the eligibility requirements for pre-permit construction approval because the proposed facility is a minor source and does not plan to utilize emission offsets or netting, and the emissions from the facility are unlikely to impact Class I air quality related values. This satisfies the requirement that a certified proof of pre-permit construction eligibility must be submitted with the pre-permit construction approval application in accordance with IDAPA 58.01.01.213.01.

This submittal includes the PTC application, a modeling section that demonstrates compliance with all applicable air quality rules, detailed emission calculations, and a copy of the newspaper announcement for the public information meeting. Additionally, this submittal contains an electronic copy of the modeling files that support this application and the \$1,000 PTC application fee.

In accordance with IDAPA 58.01.01.213.01.d, I hereby certify that Nonpareil will comply with any restrictions it has imposed on potential to emit such that emissions will be below major source levels, including emission limitations, operating limitations, and monitoring and reporting requirements.

Pursuant to IDAPA 58.01.01.123, I hereby certify that, based on information and belief formed after reasonable inquiry, the statements and information in this application are true, accurate, and complete.

Please feel free to myself at 208.785.5880 or Melissa Armer of JBR Environmental Consultants at 208.853.0883 if you have any questions or need additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Brett Suthers". The signature is fluid and cursive, with the first name "Brett" and last name "Suthers" clearly distinguishable.

Brett Suthers
Engineering Manager, Nonpareil Corporation

Enclosures

Cc: JBR Environmental Consultants, Inc.



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 NORTH HILTON, BOISE, ID 83706 • (208) 373-0502

C. L. "BUTCH" OTTER, GOVERNOR
TONI HARDESTY, DIRECTOR

April 8, 2008

Chris Johnson
Boise, Idaho

RE: Modeling Protocol for the Nonpareil Facility in Blackfoot, Idaho

Chris:

DEQ received your dispersion modeling protocol in on April 2, 2008. The modeling protocol was submitted on behalf of Nonpareil Corporation. The modeling protocol proposes methods and data for use in an ambient air impact analyses in support of a Permit to Construct application for a boiler replacement project their facility located in Blackfoot, Idaho.

DEQ's modeling staff considers the submitted dispersion modeling protocol to be approved. It should be noted, however, that the approval of this modeling protocol is not meant to imply approval of a completed dispersion modeling analysis. Please refer to the *State of Idaho Air Quality Modeling Guideline*, which is available on the Internet at http://www.deq.state.id.us/air/permits_forms/permitting/modeling_guideline.pdf, for further guidance.

To ensure a complete and timely review of the final analysis, our modeling staff requests that electronic copies of all modeling input and output files (including BPIP and AERMAP input and output files) are submitted with an analysis report. If DEQ provided model-ready meteorological data files, then these do not need to be resubmitted to DEQ with the application. If you have any further questions or comments, please contact me at (208) 373-0112.

Sincerely,

Kevin Schilling

Kevin Schilling
Stationary Source Air Modeling Coordinator
Idaho Department of Environmental Quality
208 373-0112

This checklist is designed to aid the applicant in submitting a complete pre-permit construction approval application.

I. Actions Needed Before Submitting Application

- ☒ Refer to the Rule. Read the Pre-Permit Construction requirements contained in IDAPA 58.01.01.213, Rules for the Control of Air Pollution in Idaho.
- ☒ Refer to DEQ's Pre-Permit Construction Approval Guidance Document. DEQ has developed a guidance document to aid applicants in submitting a complete pre-permit construction approval application. The guidance document is located on DEQ's website (go to http://www.deq.idaho.gov/air/permits_forms/permitting/ptc_prepermit_guidance.pdf)
- ☒ Consult with DEQ Representatives. Schedule a meeting with DEQ to discuss application requirements before submitting the pre-permit construction approval application. The meeting can be in person or on the phone. Contact DEQ's Air Quality Permit Coordinator at (208) 373-0502 to schedule the meeting. Refer to IDAPA 58.01.01.213.01b.
- ☒ Schedule Informational Meeting. Schedule an informational meeting before submitting the pre-permit construction approval application for the purposes of satisfying IDAPA 58.01.01.213.02.a. The purpose for the informational meeting is to provide information about the proposed project to the general public. Refer to IDAPA 58.01.01.213.01.c.
- ☒ Submit Ambient Air Quality Modeling Protocol. It is recommended that an ambient air quality modeling protocol be submitted to DEQ at least two (2) weeks before the pre-permit construction approval application is submitted. Contact DEQ's Air Quality Modeling Coordinator at (208) 373-0502 for information about the protocol.
- ☒ Written DEQ Approved Protocol. Written DEQ approval of the modeling protocol must be received before the pre-permit construction approval application is submitted. Refer to IDAPA 58.01.01.213.01.c.

II. Application Content

Application content should be prepared using the checklist below. The checklist is based on the requirements contained in IDAPA 58.01.01.213 and DEQ's Pre-Permit Construction Approval Guidance Document.

- ☒ Pre-Permit Construction Eligibility and Proof of Eligibility. Pre-permit construction approval is available for minor sources and for minor modifications only. Emissions netting and emissions offsets are not allowed to be used. A certified proof of pre-permit construction eligibility must be submitted with the pre-permit construction approval application. Refer to IDAPA 58.01.01.213.01.
- ☒ Request to Construct Before Obtaining a Permit to Construct. A letter requesting the ability to construct before obtaining the required permit to construct must be submitted with the pre-permit construction approval application. Refer to IDAPA 58.01.01.213.01.c.
- ☒ Apply for a Permit to Construct. Submit a Permit to Construct application using forms available on DEQ's website at http://www.deq.idaho.gov/air/permits_forms/forms/ptc_general_application.pdf. Refer to IDAPA 58.01.01.213.01.a.
- ☒ Permit to Construct Application Fee. The permit to construct application fee must be submitted at the time the original pre-permit construction approval application is submitted. Refer to IDAPA 58.01.01.224.

- ☒ Notice of Informational Meeting. Within ten (10) days after the submittal of the pre-permit construction approval application, an information meeting must be held in at least one location in the region where the stationary source will be located. The information meeting must be made known by notice published at least ten (10) days before the information meeting in a newspaper of general circulation in the county in which the stationary source will be located. A copy of this notice, as published, must be submitted with the pre-permit construction approval application. Refer to IDAPA 58.01.01.213.02.a.
- ☒ Process Description(s). The process or processes for which pre-permit construction approval is requested must be described in sufficient detail and clarity such that a member of the general public not familiar with air quality can clearly understand the proposed project. A process flow diagram is required for each process for which pre-permit construction approval is requested. Refer to IDAPA 58.01.01.213.01.c.
- ☒ Equipment List. All equipment that will be used for which pre-permit construction approval is requested must be described in detail. Such description includes, but is not limited to, manufacturer, model number or other descriptor, serial number, maximum process rate, proposed process rate, maximum heat input capacity, stack height, stack diameter, stack gas flowrate, stack gas temperature, etc. All equipment that will be used for which pre-permit construction approval is requested must be clearly labeled on the process flow diagram. Refer to IDAPA 58.01.01.213.01.c.
- ☒ Scaled Plot Plan. It is recommended that a scaled plot plan be included in the pre-permit construction approval application and must clearly label the location of each proposed process and the equipment that will be used in the process.
- ☒ Proposed Emissions Limits and Modeled Ambient Concentration for All Regulated Air Pollutants. All proposed emission limits and modeled ambient concentrations for all regulated air pollutants must demonstrate compliance with all applicable air quality rules and regulations. Regulated air pollutants include criteria air pollutants (PM₁₀, SO_x, NO₂, O₃, CO, lead), toxic air pollutants listed pursuant to IDAPA 58.01.01.585 and 586, and hazardous air pollutants listed pursuant to Section 112 of the 1990 Clean Air Act Amendments (go to <http://www.epa.gov/ttn/atw/188polls.html>). Describe in detail how the proposed emissions limits and modeled ambient concentrations demonstrate compliance with each applicable air quality rule and regulation. It is requested that emissions calculations, assumptions, and documentation be submitted with sufficient detail so DEQ can verify the validity of the emissions estimates. Refer to IDAPA 58.01.01.213.01.c.
- ☒ Restrictions on a Source's Potential to Emit. Any proposed restriction on a source's potential to emit such that permitted emissions will be either below major source levels or below a significant increase must be described in detail in the pre-permit construction approval application. Refer to IDAPA 58.01.01.213.01.d.
- ☒ List all Applicable Requirements. All applicable requirements must be cited by the rule or regulation section/subpart that applies for each emissions unit. Refer to IDAPA 58.01.01.213.01.c.
- ☒ Certification of Pre-Permit Construction Approval Application. The pre-permit construction approval application must be signed by the Responsible Official and must contain a certification signed by the Responsible Official. The certification must state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Refer to IDAPA 58.01.01.213.01.d and IDAPA 58.01.01.123.
- ☒ Submit the Pre-Construction Approval Application. Submit the pre-permit construction approval application to the following address:

Department of Environmental Quality
Air Quality Division
Stationary Source Program
1410 North Hilton
Boise, ID 83706-1255

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APR 14 2008

DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE A Q PROGRAM

Pre-Permit Application for the Authority to Construct

Nonpareil Corporation

Prepared for:
Nonpareil Corporation
40 N. 400 W. Groveland
Blackfoot, ID 83221

Prepared by:
JBR Environmental Consultants, Inc.
7669 West Riverside Drive, Suite 101
Boise, ID 83714

April 2008

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EXECUTIVE SUMMARY

Nonpareil Corporation (Nonpareil) proposes to construct a new east processing boiler, at their existing facility in Blackfoot, Idaho. The new boiler will replace the existing east processing boiler which failed in early March. The new boiler is capable of combusting natural gas or No. 2 fuel oil.

The replacement of the east processing boiler along with associated permit limits pertaining to both the processing boilers will be the only modification that affects existing permitted equipment. There will be no other changes to the process or equipment currently permitted under permit P-050300.

Nonpareil will remain a Title V major facility with a potential to emit (PTE) greater than 100 tons per year (tpy) for particulate matter with less than ten microns in diameter (PM_{10}), oxides of nitrogen (NO_x) and sulfur dioxide (SO_2). The facility will remain minor with respect to New Source Review.

1.0 PROCESS DESCRIPTION

1.0 General Overview

Nonpareil Corporation (Nonpareil) proposes to construct a new processing boiler to replace the existing east processing boiler which failed and was unable to be salvaged. The new boiler will be capable of combusting natural gas or No. 2 fuel oil. The proposed boiler equipment specifications are identified below and included in Appendix C:

1.1 Boiler Specifications

Make: Nebraska Boiler Company

Model: NS-C-50

Year: 1998

Burner: Low NO_x design (30ppm) for natural gas

Fuel Usage: 52,360 scf/hr natural gas; 340 gal/hr No. 2 fuel oil

2.0 REGULATORY APPLICABILITY

A review of state and local air quality regulations is provided in Table 2-1. Each regulation is described in the following sections. Included in Appendix C is the completed federal regulatory applicability PTC form.

Table 2-1 Regulatory Applicability Summary

Program Description		Regulatory Citation	Applicable
2.1	National Ambient Air Quality Standards (NAAQS)- (dispersion modeling)	40 CFR Part 50	Yes
2.2	Title V Operating Permit	40 CFR Part 70	Yes
2.3	Air Pollutants (NESHAPs)	40 CFR Parts 61, 63	No
2.4	New Source Review (NSR)	40 CFR Part 52	No
2.5	New Source Performance Standards (NSPS)	40 CFR Part 60	Yes
2.6	Acid Rain Requirements	40 CFR Parts 72–78	No
2.7	Risk Management Programs For Chemical Accidental Release Prevention	40 CFR Part 68	No
2.8.	State Rules		
2.8.1	Certification of Documents	IDAPA 58.01.01.123	Yes
2.8.2	Excess Emissions	IDAPA 58.01.01.130-136	Yes
2.8.3	Demonstration of Preconstruction Compliance with Toxic Standards	IDAPA 58.01.01.210	Yes
2.8.4	Ambient Air Quality Standards for Specific Air Pollutants	IDAPA 58.01.01.577	Yes
2.8.5	Toxic Air Pollutants	IDAPA 58.01.01.585 and 586	Yes
2.8.6	Open Burning	IDAPA 58.01.01.600-616	Yes
2.8.7	Visible Emissions	IDAPA 58.01.01.625	Yes
2.8.8	Rules for Control of Fugitive Dust	IDAPA 58.01.01.650	Yes
2.8.9	Fuel Burning Equipment	IDAPA 58.01.01.676	Yes

2.8.10	Particulate Matter	IDAPA 58.01.01.701	Yes
2.8.11	Odors	IDAPA 58.01.01.775-776	Yes

2.0 National Ambient Air Quality Standards (NAAQS)

Primary National Ambient Air Quality Standards (NAAQS) are identified in 40 CFR Part 50 and define levels of air quality, which the United States Environmental Protection Agency (USEPA) deems necessary to protect the public health. Secondary NAAQS define levels of air quality, which the USEPA judges necessary to protect public welfare from any known, or anticipated adverse effects of a pollutant. Examples of public welfare include protecting wildlife, buildings, national monuments, vegetation, visibility, and property values from degradation due to excessive emissions of criteria pollutants.

Specific standards for the following pollutants have been promulgated by USEPA: PM₁₀, SO₂, NO_x, CO, ozone, and lead. The Nonpareil Blackfoot facility will emit PM₁₀, SO₂, NO_x, CO, and VOCs, a precursor to ozone. The facility is a minor source with respect to PSD and a Title V major source.

2.1 Title V (Part 70) Operating Permit

Title V of the Clean Air Act (CAA) created the federal operating permit program. These permitting requirements are codified in 40 CFR Part 70. These permits are required for major sources with a PTE (considering federally enforceable limitations) greater than 100 tpy for any criteria pollutant, 25 tpy for all hazardous air pollutants (HAPs) in aggregate, or 10 tpy of any single HAP. Nonpareil is a major source because the potential to emit of PM-10, NO_x, and SO₂ emissions each exceed 100 tons per year.

2.2 National Emission Standards for Hazardous Air Pollutants (NESHAPs)

Two sets of National Emissions Standards for Hazardous Air Pollutants (NESHAPs) may potentially apply to the Nonpareil, Blackfoot facility. The first NESHAP regulations were developed under the auspices of the original CAA. These standards are codified in 40 CFR Part 61, and address a limited number of pollutants and industries. 40 CFR Part 61 regulations do not apply to this facility.

Newer regulations are codified in 40 CFR Part 63 under the authority of the 1990 Clean Air Act Amendments (CAAA). These standards regulate HAP emissions from specific source categories and typically affect only major sources of HAPs. Part 63 regulations are frequently called Maximum Achievable Control Technology (MACT) standards. Major HAP sources have the PTE 10 tpy or more of any single HAP or 25 tpy or more of all combined HAP emissions. At the Nonpareil, Blackfoot facility, potential emissions of individual HAPs will be less than 10 tpy

and combined HAP emissions will be less than 25 tpy. Therefore, the facility is not subject to 40 CFR Part 63.

2.3 New Source Review (NSR) Requirements

Bingham County is designated as an attainment area for all criteria pollutants. Therefore, the prevention of significant deterioration (PSD) regulations codified in 40 CFR Part 52 could potentially apply to the proposed facility. The PSD rule applies to: (1) a new major source that has the potential to emit 100 tons per year or more for any criteria pollutant for a facility that is one of the 28 industrial source categories listed in 40 CFR § 52.21(b)(1)(i)(a); or (2) a new major source that has the potential to emit 250 tons per year or more if the facility is not on the list of industrial source categories; or (3) a modification to an existing major source that results in a net emission increase greater than a PSD significant emission rate as specified in 40 CFR § 52.21(b)(23)(i); or (4) a modification to an existing minor source that is major in itself. The proposed modification will not result in a net emission increase greater than a PSD significant emission rate. Therefore, Nonpareil is not subject to PSD regulations.

2.4 New Source Performance Standards (NSPS)

New Source Performance Standards (NSPS) in 40 CFR Part 60 are applicable to new, modified, or reconstructed stationary sources that meet or exceed specified applicability thresholds. The new boiler is subject to NSPS Subpart Dc and will comply by burning natural gas or No. 2 fuel oil only.

2.4.1 Standards of Performance Steam Generating Units

Subpart Dc of the NSPS, "Standards of Performance for Small Industrial, Commercial, and Institutional Steam Generating Units" applies to the proposed new boiler because the total heat input is between 10 and 100 million British thermal units per hour (MMBtu/hr) and was constructed after 1989. The boiler is not subject to any emission limitations in Subpart Dc when it burns natural gas but is subject to the following requirements when it combusts No. 2 fuel oil. The boiler will also be subject to the monitoring and recordkeeping requirements identified in NSPS Subpart Dc.

Nonpareil will comply with the following subpart Dc sections:

§ 60.42c(d) Standard for sulfur dioxide (SO₂). Nonpareil will comply with this requirement by only combusting fuel oil with a sulfur content less than 0.5 weight percent.

§ 60.43c(c): Opacity shall not exceed 20% (6-minute average), except for one 6-minute period per hour of not more than 27% opacity. Nonpareil will comply with this requirement as described in § 60.45c(h).

§ 60.43c(e)(1): Particulate matter shall not be discharged into the atmosphere in excess of 0.030

lb/MMBtu heat input. According to § 60.43c(e)(4) Nonpareil is not subject to the PM limit because they will only combust fuel oil with a sulfur content less than 0.5 weight percent.

§ 60.44c(h): Nonpareil will demonstrate compliance for sulfur dioxide based on fuel supplier certification. Nonpareil will follow the procedure outlined in § 60.48c(f).

§ 60.45c(h): Nonpareil will demonstrate compliance for opacity standards and conduct an initial performance test as stated in this section.

§ 60.46c: Emission monitoring for sulfur dioxide. According to § 60.46c(e) Nonpareil is not subject to sulfur dioxide monitoring requirements because they will demonstrate compliance with the SO₂ standards based on fuel supplier certification.

§ 60.47c: Emission monitoring for particulate matter. According to § 60.47c(c) Nonpareil is not required to operate a CEMS for measuring opacity since they will follow the applicable procedures under § 60.48c(f).

§ 60.48c: Reporting and recordkeeping requirements. Nonpareil will comply with the applicable reporting and recordkeeping requirements outlined in this subpart.

2.5 Acid Rain Requirements

The acid rain requirements codified in 40 CFR Parts 72-78 apply only to utilities and other facilities that combust fossil fuel and generate electricity for wholesale or retail sale. The proposed facility will not produce electrical power for sale. Therefore, the facility is not subject to the acid rain provisions and will not require an acid rain permit.

2.6 Risk Management Programs for Chemical Accidental Release Prevention

The facility is not subject to the Chemical Accidental Release Prevention Program and will not be required to develop a Risk Management Plan (RMP). Facilities that produce, process, store, or use any regulated toxic or flammable substance in excess of the thresholds listed in 40 CFR Part 68 must develop a RMP. The facility does not store any regulated toxic or flammable substances in excess of the applicable thresholds. A RMP is not necessary for this facility.

2.7 State Rules

The Idaho Administrative Procedure Act (IDAPA) promulgates several emissions regulations that apply to Nonpareil in addition to those listed above.

2.7.1 Certification of Documents

IDAPA 58.01.01.123 requires all documents including application forms for permits to construct, records, and monitoring reports submitted to the Department shall contain a certification by a responsible official. Nonpareil will comply with this requirement and the appropriate certifications by a responsible official are being submitted with this application.

2.7.2 Excess Emissions

IDAPA 58.01.01.130-136 establishes procedures and requirements to be implemented in all excess emissions events. Nonpareil will comply with the procedures and requirements outlined in Section 131-136 and submit the necessary information and reports to DEQ related to excess emissions due to startup, shutdown, scheduled maintenance, safety measures, upsets and breakdowns.

2.7.3 Demonstration of Preconstruction Compliance with Toxic Standards

IDAPA 58.01.01.210 establishes requirements for preconstruction compliance with toxic standards. Nonpareil will comply with this rule by identifying and calculating the toxic pollutant emission rates from the new boiler.

As described in Section 3.0 Emission Summary, Nonpareil calculated the increase in Toxic Air Pollutant (TAP) emission rates from the new boiler and compared them to the screening levels. Nonpareil then modeled the ambient concentrations for those toxics which exceeded their respective emission screening levels. A complete modeling report is included in Attachment D which documents how Nonpareil demonstrates preconstruction compliance with toxic air quality preconstruction standards.

2.7.4 Ambient Air Quality Standards for Specific Air Pollutants

IDAPA 58.01.01.577 establishes ambient air quality standards for specific air pollutants including PM-10, Sulfur Dioxide, Ozone, Nitrogen Oxide, Carbon Monoxide, Fluorides and Lead. Nonpareil has demonstrated compliance with these standards and documentation of compliance is included in Attachment D.

2.7.5 Toxic Air Pollutants

IDAPA 58.01.01.585 and 586 establishes requirements for compliance with toxic air pollutants. Nonpareil demonstrates compliance with the standards in the modeling report included in Attachment D.

2.7.6 Open Burning

IDAPA 58.01.01.600 and 616 establishes requirements for open burning. Nonpareil does not expect to conduct open burning at the facility however will comply with the requirements under Section 600-616 if any allowable burning is to be conducted at the facility.

2.7.7 Visible Emission Limitation

IDAPA 58.01.01.625 restricts discharge of air pollutants into the atmosphere which is greater than 20% opacity for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period. Nonpareil will comply with this rule by conducting monthly facility-wide inspections of potential sources of visible emissions, during daylight hours and under normal operating conditions. The inspection will consist of a see/no see evaluation for each potential source. If any visible emissions are observed Nonpareil will take corrective action or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. Nonpareil will keep records onsite documenting the monthly visible emission inspection and Method 9 test conducted.

2.7.8 Rules for Control of Fugitive Dust

IDAPA 58.01.01.650 requires that all reasonable precautions be taken to prevent the generation of fugitive dust. Nonpareil will continue to comply with fugitive particulate matter regulations.

2.7.9 Fuel Burning Equipment – Particulate Matter

IDAPA 58.01.01.676 restricts any fuel burning source of greater than 10 MMBtu to limit the PM released from combustion to 0.015 gr/dscf for gas fuel and 0.50 gr/dscf for liquid fuel. The new boiler will comply with this standard as shown in Table 2-1 below.

Table 2-1
Grain Loading Emissions – New Boiler

Source	PM Emission (lb/hr)	Flow Rate @ 3% O ₂ (dscf/min)	Grain Loading (grain/dscf)	Grain Loading Standard (grain/dscf)	Meet Grain Loading Standard?
New Boiler Natural Gas	0.40	9,568	0.00488	0.015	Yes
New Boiler No. 2 Fuel Oil	1.12	9,301	0.014	0.5	Yes

2.7.10 Particulate Matter

IDAPA 58.01.01.701 promulgates restrictions on PM for the entire facility based on process weight. Fuel burning equipment is exempt from this requirement and there is no change to the existing permitted equipment.

2.7.11 Odors

IDAPA 58.01.01.775-776 requires no emissions of odorous gases, liquids, or solids to the atmosphere in such quantities as to cause air pollution. Nonpareil will comply with this requirement by keeping records of all odor complaints received and will take appropriate action for each complaint which has merit.

3.0 EMISSION SUMMARY

3.1 New Boiler Criteria Pollutants Emission Increase Calculations

A summary of the emission increase based on the potential to emit of the old boiler and the potential to emit of the new boiler are presented in Table 3-1. The “potential to potential” increase is used for modeling purposes only. Note that a net emissions increase of actual to potential emissions was not necessary to perform because Nonpareil is not a PSD major source. Nonpareil would only trigger PSD requirements if the new potential to emit was greater than 250 tpy for any pollutant. Emission calculations have been completed for: PM₁₀, SO₂, NO_x, VOCs, CO, and both individual and combined hazardous air pollutants and toxic air pollutants (TAPs). Detailed emission calculations are included in Appendix A. Permit application forms are included as Appendix C.

The emissions shown in Table 3-1 represent the maximum emission increase when comparing the currently permitted east boiler operating scenarios to the new boiler operating scenarios as listed below:

- #1. New east boiler combusting No. 2 fuel oil vs. old east boiler combusting No. 6 fuel oil
- #2. New east boiler combusting natural gas vs. old east boiler combusting natural gas

In general, when comparing the emissions from fuel oils under operating scenario #1 there was a decrease in emissions. For example, NO_x emissions from No. 6 fuel oil in the old east boiler are 14.85 lb/hr and 6.80 lb/hr from No. 2 fuel oil in the new east boiler. The exception is the CO emission estimate which result in an increase in emissions.

When comparing the emissions under operating scenario #2 which compares natural gas, there was an increase in emissions due to the new boiler being larger than the current boiler. For example, VOC emissions from natural gas in the old east boiler are 0.22 lb/hr and 0.29 lb/hr from natural gas in the new east boiler.

The annual ton per year emissions increase from the new east boiler was also calculated by comparing the currently permitted operating scenarios to the new boiler operating scenarios as well as considering fuel limits. The proposed fuel limits for the new east boiler are requested in Section 4.0. For example, NO_x emissions were calculated based on 2,011,500 gal/yr No. 6 fuel oil in the old east boiler and 2,533,000 gal/yr No. 2 fuel oil in the new east boiler. At maximum capacity, the east boiler would use each fuel oil in 7,450 hours and the remainder of the time would operate on natural gas. For CO, emissions were calculated based on the proposed maximum east boiler natural gas usage of 458,673,600 standard cubic feet per year. The natural gas limit is based on the maximum capacity of the new east boiler combusting natural gas for 8,760 hours per year.

Table 3-1 East Boiler Emission Increase

(Based on Old Capacity Vs. New Capacity, for Purposes of Modeling)

Source	NO _x		CO		PM ₁₀		SO ₂		VOC	
	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
East Boiler	0.63	2.77	1.06	4.66	0.10	0.42	0.01	0.03	0.07	0.30

3.2 Combined Boilers PTE Calculations

A summary of the maximum potential emissions resulting from operating a new east boiler in combination with the existing west boiler are presented in Table 3-2. The emissions shown in Table 3-2 represent the maximum potential emissions and were used to derive the emission limits listed in Section 4.0. These are the maximum potential emissions resulting from the three possible boiler operating scenarios listed below:

- #1. Both east and west boiler combusting natural gas
- #2. West boiler combusting No. 6 fuel oil and east boiler combusting natural gas
- #3. East boiler combusting No. 2 fuel oil and west boiler combusting natural gas.

In general, the maximum boiler potential emissions were estimated by adding the emissions from the west boiler combusting No. 6 fuel oil and the east boiler combusting natural gas. For example, NO_x emissions from No. 6 fuel oil in the west boiler are 14.85 lb/hr and 2.62 lb/hr from natural gas in the east boiler resulting in a combined total of 17.47 lb/hr. The exception is the CO emission estimate which is highest when both boilers are combusting natural gas.

The annual ton per year emissions from the boilers were also calculated based on the maximum emissions resulting from the three operating scenarios and also the proposed fuel limits requested in Section 4.0. For example, NO_x emissions were calculated based on 2,011,500 gal/yr No. 6 fuel oil in the west boiler and the east boiler operating on natural gas. At maximum capacity, the west boiler would use the maximum fuel oil in 7,450 hours and the remainder of the time would operate on natural gas. For CO, emissions were calculated based on the proposed maximum combined boiler natural gas usage of 806,497,129 standard cubic feet per year. The natural gas limit is based on the maximum capacity of both boilers combusting natural gas for 8,760 hours per year.

Table 3-2 Boilers Maximum Potential Emissions

Source	NO _x		CO		PM ₁₀		SO ₂		VOC	
	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
East Boiler	2.62	11.47	4.40	19.26	0.40	1.74	0.03	0.14	0.288	1.26
West Boiler	14.85	56.62	3.34	14.61	5.12	19.27	66.54	247.88	0.346	1.43
Total	17.47	68.08	7.73	33.87	5.52	21.01	66.57	248.02	0.63	2.69

Table 3-3 Nonpareil Facility Wide PTE

Source	NO _x		CO		PM ₁₀		SO ₂		VOC	
	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
East and West Boilers Combined	17.5	68.1	7.73	33.87	5.52	21.01	66.57	248.02	0.63	2.69
Potato Processing and NG Combustion ¹	11.3	49.5	9.5	41.6	32.4	142	0.07	0.397	0.63	2.8
	28.8	117.6	17.23	75.47	37.92	163.01	66.64	248.42	1.26	5.49

¹ No changes are being requested for all existing potato processing and NG combustion.

3.3 Toxic Air Pollutants

A summary of the increase in Toxic Air Pollutant (TAP) emissions resulting from operating a new east boiler compared to operating the existing east boiler are presented in Table 3-4 and Table 3-5 below. Detailed emission calculations are included in Appendix A.

The same methodology that was used for calculating the “potential to potential” increase in criteria pollutants from the new east boiler was also utilized for calculating the potential emissions increase for TAPs. The emissions shown in Table 3-4 are the increase in emissions under the east boiler operating scenario #1 which compares fuel oils. All non-carcinogens meet their respective EL. Carcinogens exceeding the EL under this operating scenario are beryllium, cadmium, chromium VI, and formaldehyde. The emissions shown in Table 3-5 are the increase in emissions under the east boiler operating scenario #2 which compares natural gas. All non-carcinogens meet their respective EL. Carcinogens exceeding the EL under this operating scenario are arsenic, cadmium, and formaldehyde.

Since the AACC represents an annual standard, modeling was conducted for the annual averaging time. For all carcinogens requiring modeling the maximum annual emission rate was calculated for each operating scenario and the increase from the current max annual emissions was modeled. See detailed emission calculations in Appendix A.

Table 3-4 TAPs Increase Operating Scenario #1- Fuel Oil

NON-CARCINOGENS

Pollutant	Old East Boiler #6 Fuel Oil Combustion (lb/hr)	New East Boiler #2 Fuel Oil Combustion (lb/hr)	Increase (lb/hr)	Screening Level (lb/hr)	Modeling? (Y/N)	Ton/yr
Antimony	1.42E-03	0.00E+00	-1.42E-03	3.3E-02	No	-
Barium	6.94E-04	0.00E+00	-6.94E-04	3.3E-02	No	-
Chromium	2.28E-04	1.43E-04	-8.54E-05	3.3E-02	No	-
Cobalt	1.63E-03	0.00E+00	-1.63E-03	3.3E-03	No	-
Copper	4.75E-04	2.86E-04	-1.90E-04	6.7E-02	No	-
Ethylbenzene	1.72E-05	2.16E-05	4.45E-06	2.9E+01	No	-
Fluoride	1.01E-02	0.00E+00	-1.01E-02	1.67E-01	No	-
Hexane	0.00E+00	0.00E+00	0.00E+00	1.2E+01	No	-
Manganese	8.10E-04	2.86E-04	-5.24E-04	3.33E-01	No	-
Mercury	3.05E-05	1.43E-04	1.12E-04	3.E-03	No	-
Molybdenum	2.12E-04	0.00E+00	-2.12E-04	6.67E-01	No	-
Naphthalene	3.05E-04	3.84E-04	7.91E-05	3.33E+00	No	-
Pentane	0.00E+00	0.00E+00	0.00E+00	1.18E+02	No	-
Phosphorous	2.55E-03	0.00E+00	-2.55E-03	7.0.E-03	No	-
Selenium	1.84E-04	7.14E-04	5.30E-04	1.3E-02	No	-
1,1,1 - Trichlorethane	6.37E-05	8.02E-05	1.65E-05	1.3E+02	No	-
Toluene	1.67E-03	2.11E-03	4.34E-04	2.5E+01	No	-
o-Xylene	2.94E-05	3.71E-05	7.63E-06	2.9E+01	No	-
Vanadium	8.59E-03	0.00E+00	-8.59E-03	3.0E-03	No	-
Zinc	7.86E-03	1.90E-04	-7.67E-03	6.67E-01	No	-

Table 3-4 Cont. TAPs Increase Operating Scenario #1- Fuel Oil

CARCINOGENS

Pollutant	Old East Boiler #6 Fuel Oil Combustion (lb/hr)	New East Boiler #2 Fuel Oil Combustion (lb/hr)	Increase (lb/hr)	Screening Level (lb/hr)	Modeling? (Y/N)	Ton/Yr
Arsenic	3.56E-04	1.90E-04	-1.66E-04	1.5E-06	No	-
Benzene	5.78E-05	7.28E-05	1.50E-05	8.0E-04	No	-
Beryllium	7.51E-06	1.43E-04	1.35E-04	2.8E-05	Yes	5.04E-04
Cadmium	1.07E-04	1.43E-04	3.53E-05	3.7E-06	Yes	1.41E-04
Chromium VI	6.70E-05	1.43E-04	7.58E-05	5.6E-07	Yes	2.83E-04
Formaldehyde	8.91E-03	1.12E-02	2.31E-03	5.1E-04	Yes	9.23E-03
Nickel	2.00E-02	1.43E-04	-1.98E-02	2.7E-05	No	-
Benzo(a)pyrene	0.00E+00	0.00E+00	0.00E+00	2.0E-06	No	-
Benz(a)anthracene	1.08E-06	1.36E-06	2.81E-07	NA	NA	-
Benzo(b,k)fluoranthene	4.00E-07	5.03E-07	1.04E-07	NA	NA	-
Chrysene	6.43E-07	8.09E-07	1.67E-07	NA	NA	-
Dibenzo(a,h)anthracene	4.51E-07	5.68E-07	1.17E-07	NA	NA	-
Indeno(1,2,3-cd) pyrene	5.78E-07	7.28E-07	1.50E-07	NA	NA	-
Total PAHs	3.55E-06	4.47E-06	9.21E-07	2.00E-06	No	-

Table 3-5 TAPs Increase Operating Scenario #2- Natural Gas

NON-CARCINOGENS

Pollutant	Old East Boiler NG Combustion (lb/hr)	New East Boiler NG Combustion (lb/hr)	Increase (lb/hr)	Screening Level (lb/hr)	Modeling? (Y/N)	Ton/yr
Antimony	0.00E+00	0.00E+00	0.00E+00	3.3E-02	No	-
Barium	1.75E-04	2.30E-04	5.57E-05	3.3E-02	No	-
Chromium	5.56E-05	7.33E-05	1.77E-05	3.3E-02	No	-
Cobalt	3.34E-06	4.40E-06	1.06E-06	3.3E-03	No	-
Copper	3.38E-05	4.45E-05	1.08E-05	6.7E-02	No	-
Ethylbenzene	0.00E+00	0.00E+00	0.00E+00	2.9E+01	No	-
Fluoride	0.00E+00	0.00E+00	0.00E+00	1.67E-01	No	-
Hexane	7.15E-02	9.42E-02	2.28E-02	1.2E+01	No	-
Manganese	1.51E-05	1.99E-05	4.81E-06	3.33E-01	No	-
Mercury	1.03E-05	1.36E-05	3.29E-06	3.E-03	No	-
Molybdenum	4.37E-05	5.76E-05	1.39E-05	6.67E-01	No	-
Naphthalene	2.42E-05	3.19E-05	7.72E-06	3.33E+00	No	-
Pentane	1.03E-01	1.36E-01	3.29E-02	1.18E+02	No	-
Phosphorous	0.00E+00	0.00E+00	0.00E+00	7.0.E-03	No	-
Selenium	9.53E-07	1.26E-06	3.04E-07	1.3E-02	No	-
1,1,1 - Trichlorethane	0.00E+00	0.00E+00	0.00E+00	1.3E+02	No	-
Toluene	1.35E-04	1.78E-04	4.30E-05	2.5E+01	No	-
o-Xylene	0.00E+00	0.00E+00	0.00E+00	2.9E+01	No	-
Vanadium	9.13E-05	1.20E-04	2.91E-05	3.0E-03	No	-
Zinc	1.15E-03	1.52E-03	3.67E-04	6.67E-01	No	-

Table 3-5 Cont. TAPs Increase Operating Scenario #2- Natural Gas

CARCINOGENS

Pollutant	Old East Boiler NG Combustion (lb/hr)	New East Boiler NG Combustion (lb/hr)	Increase (lb/hr)	Screening Level (lb/hr)	Modeling? (Y/N)	Ton/Yr
Arsenic	7.94E-06	1.05E-05	2.53E-06	1.5E-06	Yes	1.11E-05
Benzene	8.34E-05	1.10E-04	2.66E-05	8.0E-04	No	-
Beryllium	4.76E-07	6.28E-07	1.52E-07	2.8E-05	No	-
Cadmium	4.37E-05	5.76E-05	1.39E-05	3.7E-06	Yes	6.10E-05
Chromium VI	0.00E+00	0.00E+00	0.00E+00	5.6E-07	No	-
Formaldehyde	2.98E-03	3.93E-03	9.49E-04	5.1E-04	Yes	4.16E-03
Nickel	8.34E-05	1.10E-04	2.66E-05	2.7E-05	No	-
Benzo(a)pyrene	4.76E-08	6.28E-08	1.52E-08	2.0E-06	No	-
Benz(a)anthracene	7.15E-08	9.42E-08	2.28E-08	NA	NA	-
Benzo(b,k)fluoranthene	7.15E-08	9.42E-08	2.28E-08	NA	NA	-
Chrysene	7.15E-08	9.42E-08	2.28E-08	NA	NA	-
Dibenzo(a,h)anthracene	4.76E-08	6.28E-08	1.52E-08	NA	NA	-
Indeno(1,2,3-cd)pyrene	7.15E-08	9.42E-08	2.28E-08	NA	NA	-
Total PAHs	4.53E-07	5.97E-07	1.44E-07	2.00E-06	No	-

4.0 PROPOSED PERMIT LIMITS

Nonpareil proposes the following permit limits on the operation of the new east boiler. To be consistent with Nonpareil's current permit P-050300 the proposed permit limits will be for the east and west boilers combined. These proposed emission limits coincide with the data utilized in the ambient air modeling included in Appendix D which demonstrates compliance with ambient air quality standards. Nonpareil is requesting limits on fuel throughputs, not operating hours per year. Note that only one boiler will operate with fuel oil at a time; Nonpareil is requesting fuel restrictions on each boiler individually.

4.1 East and West Processing Boilers Emission Limits

The following emission limits are being requested for the new east boiler operating in combination with the existing west boiler.

- The PM₁₀ emissions from the east and west processing boiler stacks combined shall not exceed 5.52 pounds per hour (lb/hr) or 21.01 tons per any consecutive 12-month period.
- The SO₂ emissions from the east and west processing boiler stacks combined shall not exceed 66.57 pounds per hour (lb/hr) or 248.02 tons per any consecutive 12-month period.
- The nickel emissions from the east and west processing boiler stacks combined shall not exceed 175 pounds per any consecutive 12-month period.

Emission calculations were calculated as described in section 3.0 Emission Summary and have demonstrated compliance with ambient air quality standards.

4.2 East and West Processing Boilers Operating Limits

The following operating limits are being requested for the east boiler operating in combination with the existing west boiler.

- The east boiler shall only be fueled on natural gas or No. 2 fuel oil.
- The west boiler shall only be fueled on natural gas or No. 6 fuel oil.
- Only one boiler shall combust fuel oil at any one time. When the east boiler is combusting No. 2 fuel oil the west boiler shall only combust natural gas. When the west boiler is combusting No. 6 fuel oil the east boiler shall only combust natural gas.

- Prior to combusting any type of fuel oil in the east and west boilers, the height of each boiler exhaust stack shall be at least 60 feet above ground level elevation.
- The No. 6 residual fuel oil sulfur content shall not exceed the lesser of 1.55% sulfur by weight or the highest values recorded during a performance test which demonstrated compliance with PTC P-050300 Permit Conditions 2.6, 2.10, and 3.3. The residual fuel oil ash content shall not exceed the highest values recorded during a performance test which demonstrated compliance with PTC P-050300 Permit Conditions 2.6, 2.10, and 3.3.
- The No. 2 fuel oil sulfur content shall not exceed the lesser of 0.5% sulfur by weight.
- The fuel oil combusted in either boiler shall contain no more than 0.074 pounds of nickel by weight per 1,000 gallons of fuel. A sample of the No. 6 or No. 2 fuel oil shall be taken of each shipment of oil and analyzed to determine the nickel content.
- The west boiler No. 6 fuel oil throughput shall not exceed 270 gallons per hour or 2,011,500 gallons per any consecutive 12-month period.
- The east boiler No. 2 fuel oil throughput shall not exceed 340 gallons per hour or 2,533,000 gallons per any consecutive 12-month period.
- The east and west boilers combined natural gas throughput shall not exceed 806.5 MMscf per any consecutive 12-month period.

Emission calculations were calculated based on the above mentioned parameters and have demonstrated compliance with ambient air quality standards; therefore no additional operational limits are being requested.

APPENDIX A
EMISSION CALCULATIONS

EAST BOILER EMISSION INCREASE

OPERATING SCENARIO #1- EMISSION INCREASE FROM FUEL OIL

Description	NOx Emissions		CO Emissions		PM-10 Emissions		SOx Emissions		VOC Emissions		HAP Emissions
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	T/yr
Existing East Boiler #6 Fuel Oil	14.85	56.62	3.34	7.21	5.12	19.27	66.54	247.88	0.35	1.43	1.69E-01
New East Boiler #2 Fuel Oil	6.80	27.04	4.40	9.21	1.12	4.44	24.480	91.2086	0.09	0.51	1.24E-01
Increase comparing new #2 to old #6	-8.05	-29.57	1.06	2.00	-4.00	-14.83	-42.06	-156.67	-0.26	-0.92	-0.04

OPERATING SCENARIO #2-EMISSION INCREASE FROM NATURAL GAS

Description	NOx Emissions		CO Emissions		PM-10 Emissions		SOx Emissions		VOC Emissions		HAP Emissions
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	T/yr
Existing East Boiler NG	1.99	8.70	3.34	14.61	0.30	1.32	0.02	0.10	0.22	0.96	3.28E-01
New East Boiler NG	2.62	11.47	4.40	19.26	0.40	1.74	0.03	0.14	0.29	1.26	4.33E-01
Increase comparing new to old NG	0.63	2.77	1.06	4.66	0.10	0.42	0.01	0.03	0.07	0.30	0.10

EMISSION INCREASE

NOx Emissions		CO Emissions		PM-10 Emissions		SOx Emissions		VOC Emissions		HAP Emissions
lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	T/yr
0.63	2.77	1.06	4.66	0.10	0.42	0.01	0.03	0.07	0.30	0.10

NEW EAST AND EXISTING WEST BOILERS COMBINED MAX PTE AND EMISSION INCREASE

NEW EAST BOILER AND EXISTING WEST BOILER COMBINED MAX PTE

Description	NOx Emissions		CO Emissions		PM-10 Emissions		SOx Emissions		VOC Emissions	
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
New Processing East Boiler NG	2.62	11.47	4.40	19.26	0.40	1.74	0.031	0.14	0.29	1.26
Processing West Boiler #6	14.85	56.62	3.34	14.61	5.12	19.27	66.54	247.88	0.346	1.43
Total	17.47	68.08	7.73	33.87	5.52	21.01	66.573	248.02	0.63	2.69

CURRENTLY PERMITTED EAST AND WEST BOILER MAX PTE

Description	NOx Emissions		CO Emissions		PM-10 Emissions		SOx Emissions		VOC Emissions	
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Existing Processing East Boiler NG	1.99	8.70	3.34	14.61	0.30	1.32	0.024	0.10	0.22	0.96
Processing West Boiler #6	14.85	56.62	3.34	14.61	5.12	19.27	66.54	247.88	0.346	1.43
Total	16.84	65.31	6.67	29.22	5.42	20.59	66.565	247.99	0.56	2.39

EMISSION INCREASE

NOx Emissions		CO Emissions		PM-10 Emissions		SOx Emissions		VOC Emissions	
lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
0.63	2.77	1.06	4.66	0.10	0.42	0.01	0.03	0.07	0.30

CRITERIA EMISSIONS - NATURAL GAS COMBUSTION - NONPAREIL

Emission Factors

NOx	50 lb/10 ⁶ scf	AP-42, Table 1.4-1, 1998, Low NOx Burners
NOx	100 lb/10 ⁶ scf	AP-42, Table 1.4-1, 1998
CO	84 lb/10 ⁶ scf	AP-42, Table 1.4-1, 1998
PM-10	7.6 lb/10 ⁶ scf	AP-42, Table 1.4-2, 1998
SOx	0.6 lb/10 ⁶ scf	AP-42, Table 1.4-2, 1998
VOC	5.5 lb/10 ⁶ scf	AP-42, Table 1.4-2, 1998
Nickel	0.0021 lb/10 ⁶ scf	AP-42, Table 1.4-4, 1999
Lead	0.0005 lb/10 ⁶ scf	AP-42, Table 1.4-2, 1998

Description	Capacity (MMBtu/hr)	Throughput (scf/hr) ^a	Pounds per Hour						
			NOx Emissions (lb/hr)	CO Emissions (lb/hr)	PM-10 Emissions (lb/hr)	SOx Emissions (lb/hr)	VOC Emissions (lb/hr)	Lead Emissions (lb/hr)	Nickel Emissions (lb/hr)
Processing East Boiler ^a	52.4	52,360	2.62	4.40	0.398	0.0314	0.29	2.62E-05	1.10E-04
Processing West Boiler ^a	40.5	39,706	1.99	3.34	0.302	0.0238	0.22	1.99E-05	8.34E-05
		92,066							
Total NG			4.60	7.73	0.70	0.06	0.51	4.60E-05	1.93E-04

Description	Capacity (MMBtu/hr)	Throughput (scf/yr)	Ton per Year						
			NOx Emissions (T/yr)	CO Emissions (T/yr)	PM-10 Emissions (T/yr)	SOx Emissions (T/yr)	VOC Emissions (T/yr)	Lead Emissions (T/yr)	Nickel Emissions (T/yr)
Processing East Boiler ^a	52.4	458,673,600	11.47	19.26	1.74	0.1376	1.26	1.15E-04	4.82E-04
Processing West Boiler ^a	40.5	347,823,529	8.70	14.61	1.32	0.1043	0.96	8.70E-05	3.65E-04
		806,497,129							
Total NG			20.16	33.87	3.06	0.24	2.22	0.00	0.00

^aUtilize Low NOx Burners and operating 8760 hr/yr NG

Description	Capacity (MMBtu/hr)	Throughput (scf/yr)	Ton per Year- Portion of yr not operating on fuel oil						
			NOx Emissions (T/yr)	CO Emissions (T/yr)	PM-10 Emissions (T/yr)	SOx Emissions (T/yr)	VOC Emissions (T/yr)	Lead Emissions (T/yr)	Nickel Emissions (T/yr)
Processing East Boiler ^a	52.4	68,591,600	1.71	2.88	0.26	0.02	0.19	0.00	0.00
Processing West Boiler ^a	40.5	52,014,706	1.30	2.18	0.20	0.02	0.14	0.00	0.00

^aUtilize Low NOx Burners and operating 1310 hr/yr NG

^bNew East Boiler Fuel Calculation: 2,200 lb fuel/hr (per manf. data) x 23.8 cf/lb fuel (AP-42) = 52,360 scf fuel/hr

CRITERIA EMISSIONS - RESIDUAL FUEL OIL # 6 or DISTILLATE #2 COMBUSTION - NONPAREIL

#6 FUEL OIL Emission Factors

NOx	55 lb/10 ³ gal	AP-42, Table 1.3-1, 1998	
CO	5 lb/10 ³ gal	AP-42, Table 1.3-1, 1998	
PM-10	18.96 lb/10 ³ gal	AP-42, Table 1.3-1 (Errata used) and Table 1.3-2, 1998	
SO ₂	157 *S lb/10 ³ gal	AP-42, Table 1.3-1, 1998	S= 1.55
SO ₃	2 *S lb/10 ³ gal	AP-42, Table 1.3-1, 1998	S= 1.55
VOC	1.28 lb/10 ³ gal	AP-42, Table 1.3-3, 1998	
Nickel	0.074 lb/10 ³ gal	AP-42, Table 1.3-11, 1998	
Lead	0.00151 lb/10 ³ gal	AP-42, Table 1.3-11, 1998	

#2 FUEL OIL Emission Factors

NOx	20 lb/10 ³ gal	AP-42, Table 1.3-1, 1998	
CO	5 lb/10 ³ gal	AP-42, Table 1.3-1, 1998	
PM-10	3.3 lb/10 ³ gal	AP-42, Table 1.3-1 and Table 1.3-2, 1998	
SO ₂	142 *S lb/10 ³ gal	AP-42, Table 1.3-1, 1998	S= 0.5
SO ₃	2 *S lb/10 ³ gal	AP-42, Table 1.3-1, 1998	S= 0.5
VOC	0.252 lb/10 ³ gal	AP-42, Table 1.3-3, 1998	
Nickel	3 lb/10 ³ Btu	AP-42, Table 1.3-10, 1998	
Lead	9 lb/10 ³ Btu	AP-42, Table 1.3-10, 1998	

Description	Capacity (MMBtu/hr)	Throughput (gal/hr) ^c	lb/hr						
			NOx Emissions (lb/hr)	CO Emissions (lb/hr)	PM-10 Emissions (lb/hr)	SOx Emissions (lb/hr) ^a	VOC Emissions (lb/hr)	Lead Emissions (lb/hr)	Nickel Emissions (lb/hr)
Processing East Boiler	47.6	340	6.80	1.70	1.12	24.48	0.086	0.0004	0.0001
Processing West Boiler	40.5	270	14.85	1.35	5.12	66.5	0.346	0.0004	0.0200

^aIs the sum of SO₂ and SO₃ emissions

Description	Capacity (MMBtu/hr)	Throughput (gal/yr)	Ton per Year- Portion of yr operating on fuel oil ^b						
			NOx Emissions (T/yr)	CO Emissions (T/yr)	PM-10 Emissions (T/yr)	SOx Emissions (T/yr) ^a	VOC Emissions (T/yr)	Lead Emissions (T/yr)	Nickel Emissions (T/yr)
Processing East Boiler	47.6	2,533,000	25.3	6.3	4.2	91.188	0.3	0.0016	0.0005
Processing West Boiler	40.5	2,011,500	55.3	5.0	19.1	247.9	1.3	0.0015	0.07443

^aIs the sum of SO₂ and SO₃ emissions

^bBased on 7,450 hr/yr operating on fuel oil only

^cNew East Boiler Fuel Calculation: 2,400 lb fuel/hr (per manf. data) ÷ 7.05 lb fuel/gal (AP-42) = 340 gal fuel/hr

TOXIC AIR POLLUTANTS (TAPs) CALCULATIONS - NONPAREIL

NON-CARCINOGENS (POUNDS PER HOUR)

Pollutant	CAS #	EF for NG Combustion (lb/10 ⁶ scf) ^a	EF for Fuel Oil # 6 Combustion (lb/10 ³ gal) ^b	EF for Fuel Oil # 2 Combustion (lb/10 ¹² Btu) or (lb/10 ³ gal) ^{b,c}	Old East Boiler NG Combustion (lb/hr)	New East Boiler NG Combustion (lb/hr)	Old East Boiler #6 Fuel Oil Combustion (lb/hr)	New East Boiler #2 Fuel Oil Combustion (lb/hr)
Antimony	7440-36-0	0.0E+00	5.25E-03	0.0E+00	0.00E+00	0.00E+00	1.42E-03	0.00E+00
Barium	7440-39-3	4.4E-03	2.57E-03	0.0E+00	1.75E-04	2.30E-04	6.94E-04	0.00E+00
Chromium	7440-47-3	1.4E-03	8.45E-04	3.00E+00	5.56E-05	7.33E-05	2.28E-04	1.43E-04
Cobalt	7440-48-4	8.4E-05	6.02E-03	0.00E+00	3.34E-06	4.40E-06	1.63E-03	0.00E+00
Copper	7440-50-8	8.5E-04	1.76E-03	6.00E+00	3.38E-05	4.45E-05	4.75E-04	2.86E-04
Ethylbenzene	100-41-4	0.0E+00	6.36E-05	6.36E-05	0.00E+00	0.00E+00	1.72E-05	2.16E-05
Fluoride (as F)	16984-48-8	0.0E+00	3.73E-02	0.00E+00	0.00E+00	0.00E+00	1.01E-02	0.00E+00
Hexane	110-54-3	1.8E+00	0.00E+00	0.00E+00	7.15E-02	9.42E-02	0.00E+00	0.00E+00
Manganese	7439-96-5	3.8E-04	3.00E-03	6.00E+00	1.51E-05	1.99E-05	8.10E-04	2.86E-04
Mercury	7439-97-6	2.6E-04	1.13E-04	3.00E+00	1.03E-05	1.36E-05	3.05E-05	1.43E-04
Molybdenum	7439-98-7	1.1E-03	7.87E-04	0.00E+00	4.37E-05	5.76E-05	2.12E-04	0.00E+00
Naphthalene	91-20-3	6.1E-04	1.13E-03	1.13E-03	2.42E-05	3.19E-05	3.05E-04	3.84E-04
Pentane	109-66-0	2.6E+00	0.00E+00	0.00E+00	1.03E-01	1.36E-01	0.00E+00	0.00E+00
Phosphorous	7723-14-0	0.0E+00	9.46E-03	0.00E+00	0.00E+00	0.00E+00	2.55E-03	0.00E+00
Selenium	7782-49-2	2.4E-05	6.83E-04	1.50E+01	9.53E-07	1.26E-06	1.84E-04	7.14E-04
1,1,1-Trichloroethane	71-55-6	0.0E+00	2.36E-04	2.36E-04	0.00E+00	0.00E+00	6.37E-05	8.02E-05
Toluene	108-88-3	3.4E-03	6.20E-03	6.20E-03	1.35E-04	1.78E-04	1.67E-03	2.11E-03
o-Xylene	1330-20-7	0.0E+00	1.09E-04	1.09E-04	0.00E+00	0.00E+00	2.94E-05	3.71E-05
Vanadium	1314-62-1	2.3E-03	3.18E-02	0.00E+00	9.13E-05	1.20E-04	8.59E-03	0.00E+00
Zinc	7440-66-6	2.9E-02	2.91E-02	4.00E+00	1.15E-03	1.52E-03	7.86E-03	1.90E-04

CARCINOGENS (POUNDS PER HOUR)

Pollutant	CAS #	EF for Natural Gas Combustion (lb/10 ⁶ scf) ^a	EF for Fuel Oil # 6 Combustion (lb/10 ³ gal) ^b	EF for Fuel Oil # 2 Combustion (lb/10 ¹² Btu) or (lb/10 ³ gal) ^{b,c}	Old East Boiler NG Combustion (lb/hr)	New East Boiler NG Combustion (lb/hr)	Old East Boiler #6 Fuel Oil Combustion (lb/hr)	New East Boiler #2 Fuel Oil Combustion (lb/hr)
Arsenic	7440-38-2	2.0E-04	1.32E-03	4.00E+00	7.94E-06	1.05E-05	3.56E-04	1.90E-04
Benzene	71-43-2	2.1E-03	2.14E-04	2.14E-04	8.34E-05	1.10E-04	5.78E-05	7.28E-05
Beryllium	7440-41-7	1.2E-05	2.78E-05	3.00E+00	4.76E-07	6.28E-07	7.51E-06	1.43E-04
Cadmium	7440-43-9	1.1E-03	3.98E-04	3.00E+00	4.37E-05	5.76E-05	1.07E-04	1.43E-04
Chromium VI	7440-47-3	0.0E+00	2.48E-04	3.00E+00	0.00E+00	0.00E+00	6.70E-05	1.43E-04
Formaldehyde	50-00-0	7.5E-02	3.30E-02	3.30E-02	2.98E-03	3.93E-03	8.91E-03	1.12E-02
Nickel	7440-02-0	2.1E-03	7.40E-02	3.00E+00	8.34E-05	1.10E-04	2.00E-02	1.43E-04
Benzo(a)pyrene	50-32-8	1.2E-06	0.00E+00	0.00E+00	4.76E-08	6.28E-08	0.00E+00	0.00E+00
Benz(a)anthracene	56-55-3	1.8E-06	4.01E-06	4.01E-06	7.15E-08	9.42E-08	1.08E-06	1.36E-06
Benzo(b)fluoranthene	205-82-3	1.8E-06	1.48E-06	1.48E-06	7.15E-08	9.42E-08	4.00E-07	5.03E-07
Benzo(k)fluoranthene	205-99-2	1.8E-06	1.48E-06	1.48E-06	7.15E-08	9.42E-08	4.00E-07	5.03E-07
Chrysene	218-01-9	1.8E-06	2.38E-06	2.38E-06	7.15E-08	9.42E-08	6.43E-07	8.09E-07
Dibenzo(a,h)anthracene	53-70-3	1.2E-06	1.67E-06	1.67E-06	4.76E-08	6.28E-08	4.51E-07	5.68E-07
Indeno(1,2,3-cd)pyrene	193-39-5	1.8E-06	2.14E-06	2.14E-06	7.15E-08	9.42E-08	5.78E-07	7.28E-07
Total PAHs		1.1E-05	1.3E-05	1.3E-05	4.53E-07	5.97E-07	3.55E-06	4.47E-06

^aEFs from AP-42, Tables 1.4-3 and 1.4-4, 7/98

^bEFs from AP-42, Tables 1.3-9 and 1.3-11, 9/98

^cEFs from AP-42, Tables 1.3-109/99

TOXIC AIR POLLUTANT EMISSION INVENTORY - NONPAREIL

OPERATING SCENARIO #1- EMISSION INCREASE FROM FUEL OIL

NON-CARCINOGENS

Pollutant	Old East Boiler #6 Fuel Oil Combustion (lb/hr)	New East Boiler #2 Fuel Oil Combustion (lb/hr)	Increase (lb/hr)	Screening Level (lb/hr)	Modeling? (Y/N)	Ton/Yr
Antimony	1.42E-03	0.00E+00	-1.42E-03	3.3E-02	No	-
Barium	6.94E-04	0.00E+00	-6.94E-04	3.3E-02	No	-
Chromium	2.28E-04	1.43E-04	-8.54E-05	3.3E-02	No	-
Cobalt	1.63E-03	0.00E+00	-1.63E-03	3.3E-03	No	-
Copper	4.75E-04	2.86E-04	-1.90E-04	6.7E-02	No	-
Ethylbenzene	1.72E-05	2.16E-05	4.45E-06	2.9E+01	No	-
Fluoride	1.01E-02	0.00E+00	-1.01E-02	1.67E-01	No	-
Hexane	0.00E+00	0.00E+00	0.00E+00	1.2E+01	No	-
Manganese	8.10E-04	2.86E-04	-5.24E-04	3.33E-01	No	-
Mercury	3.05E-05	1.43E-04	1.12E-04	3.E-03	No	-
Molybdenum	2.12E-04	0.00E+00	-2.12E-04	6.67E-01	No	-
Naphthalene	3.05E-04	3.84E-04	7.91E-05	3.33E+00	No	-
Pentane	0.00E+00	0.00E+00	0.00E+00	1.18E+02	No	-
Phosphorous	2.55E-03	0.00E+00	-2.55E-03	7.0E-03	No	-
Selenium	1.84E-04	7.14E-04	5.30E-04	1.3E-02	No	-
1,1,1 - Trichlorethane (Methyl Chloroform)	6.37E-05	8.02E-05	1.65E-05	1.3E+02	No	-
Toluene	1.67E-03	2.11E-03	4.34E-04	2.5E+01	No	-
o-Xylene	2.94E-05	3.71E-05	7.63E-06	2.9E+01	No	-
Vanadium	8.59E-03	0.00E+00	-8.59E-03	3.0E-03	No	-
Zinc	7.86E-03	1.90E-04	-7.67E-03	6.67E-01	No	-

CARCINOGENS

Pollutant	Old East Boiler #6 Fuel Oil Combustion (lb/hr)	New East Boiler #2 Fuel Oil Combustion (lb/hr)	Increase (lb/hr)	Screening Level (lb/hr)	Modeling? (Y/N)	Ton/Yr
Arsenic	3.56E-04	1.90E-04	-1.66E-04	1.5E-06	No	-
Benzene	5.78E-05	7.28E-05	1.50E-05	8.0E-04	No	-
Beryllium	7.51E-06	1.43E-04	1.35E-04	2.8E-05	Yes	5.04E-04
Cadmium	1.07E-04	1.43E-04	3.53E-05	3.7E-06	Yes	1.41E-04
Chromium VI	6.70E-05	1.43E-04	7.58E-05	5.6E-07	Yes	2.83E-04
Formaldehyde	8.91E-03	1.12E-02	2.31E-03	5.1E-04	Yes	9.23E-03
Nickel	2.00E-02	1.43E-04	-1.98E-02	2.7E-05	No	-
Benzo(a)pyrene	0.00E+00	0.00E+00	0.00E+00	2.0E-06	No	-
Benz(a)anthracene	1.08E-06	1.36E-06	2.81E-07	NA	NA	-
Benzo(b,k)fluoranthene	4.00E-07	5.03E-07	1.04E-07	NA	NA	-
Chrysene	6.43E-07	8.09E-07	1.67E-07	NA	NA	-
Dibenzo(a,h)anthracene	4.51E-07	5.68E-07	1.17E-07	NA	NA	-
Indeno(1,2,3-cd)pyrene	5.78E-07	7.28E-07	1.50E-07	NA	NA	-
Total PAHs	3.55E-06	4.47E-06	9.21E-07	2.00E-06	No	-

HAPs Inventory

Pollutant	Old East Boiler #6 Fuel Oil Combustion (tpy)	New East Boiler #2 Fuel Oil Combustion (tpy)	Increase (tpy)
Arsenic	1.33E-03	7.16E-04	-6.17E-04
Benzene	2.70E-04	3.43E-04	7.32E-05
Beryllium	2.83E-05	5.32E-04	5.04E-04
Cadmium	4.29E-04	5.70E-04	1.41E-04
Ethylbenzene	6.4E-05	8.1E-05	1.66E-05
Formaldehyde	3.5E-02	4.4E-02	9.23E-03
Chromium	2.5E-04	5.3E-04	2.83E-04
Lead	1.5E-03	1.6E-03	8.13E-05
Mercury	1.2E-04	5.4E-04	4.20E-04
1,1,1 - Trichlorethane (Methyl Chloroform)	2.4E-04	3.0E-04	6.15E-05
Naphthalene	1.2E-03	1.5E-03	3.00E-04
Nickel	7.4E-02	6.0E-04	-7.39E-02
Xylene	1.1E-04	1.4E-04	2.84E-05
Selenium	6.9E-04	2.7E-03	1.97E-03
Toluene	6.3E-03	8.0E-03	1.64E-03
Hexane	4.7E-02	6.2E-02	1.49E-02
Total	1.69E-01	1.24E-01	-4.48E-02

TOXIC AIR POLLUTANT EMISSION INVENTORY - NONPAREIL

OPERATING SCENARIO #2- EMISSION INCREASE FROM NATURAL GAS

NON-CARCINOGENS

Pollutant	Old East Boiler NG Combustion (lb/hr)	New East Boiler NG Combustion (lb/hr)	Increase (lb/hr)	Screening Level (lb/hr)	Modeling? (Y/N)	Ton/Yr
Antimony	0.00E+00	0.00E+00	0.00E+00	3.3E-02	No	-
Barium	1.75E-04	2.30E-04	5.57E-05	3.3E-02	No	-
Chromium	5.56E-05	7.33E-05	1.77E-05	3.3E-02	No	-
Cobalt	3.34E-06	4.40E-06	1.06E-06	3.3E-03	No	-
Copper	3.38E-05	4.45E-05	1.08E-05	6.7E-02	No	-
Ethylbenzene	0.00E+00	0.00E+00	0.00E+00	2.9E+01	No	-
Fluoride	0.00E+00	0.00E+00	0.00E+00	1.67E-01	No	-
Hexane	7.15E-02	9.42E-02	2.28E-02	1.2E+01	No	-
Manganese	1.51E-05	1.99E-05	4.81E-06	3.33E-01	No	-
Mercury	1.03E-05	1.36E-05	3.29E-06	3.E-03	No	-
Molybdenum	4.37E-05	5.76E-05	1.39E-05	6.67E-01	No	-
Naphthalene	2.42E-05	3.19E-05	7.72E-06	3.33E+00	No	-
Pentane	1.03E-01	1.36E-01	3.29E-02	1.18E+02	No	-
Phosphorous	0.00E+00	0.00E+00	0.00E+00	7.0E-03	No	-
Selenium	9.53E-07	1.26E-06	3.04E-07	1.3E-02	No	-
1,1,1 - Trichlorethane (Methyl Chloroform)	0.00E+00	0.00E+00	0.00E+00	1.3E+02	No	-
Toluene	1.35E-04	1.78E-04	4.30E-05	2.5E+01	No	-
o-Xylene	0.00E+00	0.00E+00	0.00E+00	2.9E+01	No	-
Vanadium	9.13E-05	1.20E-04	2.91E-05	3.0E-03	No	-
Zinc	1.15E-03	1.52E-03	3.67E-04	6.67E-01	No	-

CARCINOGENS

Pollutant	Old East Boiler NG Combustion (lb/hr)	New East Boiler NG Combustion (lb/hr)	Increase (lb/hr)	Screening Level (lb/hr)	Modeling? (Y/N)	Ton/Yr
Arsenic	7.94E-06	1.05E-05	2.53E-06	1.5E-06	Yes	1.11E-05
Benzene	8.34E-05	1.10E-04	2.66E-05	8.0E-04	No	-
Beryllium	4.76E-07	6.28E-07	1.52E-07	2.8E-05	No	-
Cadmium	4.37E-05	5.76E-05	1.39E-05	3.7E-06	Yes	6.10E-05
Chromium VI	0.00E+00	0.00E+00	0.00E+00	5.6E-07	No	-
Formaldehyde	2.98E-03	3.93E-03	9.49E-04	5.1E-04	Yes	4.16E-03
Nickel	8.34E-05	1.10E-04	2.66E-05	2.7E-05	No	-
Benzo(a)pyrene	4.76E-08	6.28E-08	1.52E-08	2.0E-06	No	-
Benz(a)anthracene	7.15E-08	9.42E-08	2.28E-08	NA	NA	-
Benzo(b,k)fluoranthene	7.15E-08	9.42E-08	2.28E-08	NA	NA	-
Chrysene	7.15E-08	9.42E-08	2.28E-08	NA	NA	-
Dibenzo(a,h)anthracene	4.76E-08	6.28E-08	1.52E-08	NA	NA	-
Indeno(1,2,3-cd)pyrene	7.15E-08	9.42E-08	2.28E-08	NA	NA	-
Total PAHs	4.53E-07	5.97E-07	1.44E-07	2.00E-06	No	-

HAPs Inventory

Pollutant	Old East Boiler #6 Fuel Oil Combustion (tpy)	New East Boiler #2 Fuel Oil Combustion (tpy)	Increase (tpy)
Arsenic	3.48E-05	4.59E-05	1.11E-05
Benzene	3.65E-04	4.82E-04	1.16E-04
Beryllium	2.09E-06	2.75E-06	6.65E-07
Cadmium	1.91E-04	2.52E-04	6.10E-05
Ethylbenzene	0.0E+00	0.0E+00	0.00E+00
Formaldehyde	1.30E-02	1.72E-02	4.16E-03
Chromium	1.91E-04	2.52E-04	6.10E-05
Lead	8.70E-05	1.15E-04	2.77E-05
Mercury	4.5E-05	6.0E-05	1.44E-05
1,1,1 - Trichlorethane (Methyl Chloroform)	0.0E+00	0.0E+00	0.00E+00
Naphthalene	1.1E-04	1.4E-04	3.38E-05
Nickel	3.65E-04	4.82E-04	1.16E-04
Xylene	0.0E+00	0.0E+00	0.00E+00
Selenium	4.2E-06	5.5E-06	1.33E-06
Toluene	5.9E-04	7.8E-04	1.88E-04
Hexane	3.13E-01	4.13E-01	9.98E-02
Total	3.28E-01	4.33E-01	1.05E-01

	Source ID	Stack Config	Stack Ht (ft)	Temp (°F)	Exhaust flow (acfm)	Exit Vel (m/sec)	Stack Diam (m)	Source Data
Existing Processing East boiler NG	39 EU_01	Vertical	26	410	9400	11.5	0.711	Previously modeled- current stack height and manufacturer's data
New Processing East boiler NG	39 EU_08	Vertical	60	335	14353	10.31	0.914	Proposed stack height and manufacturer's data
Existing Processing East boiler #6	39 EU-01	Vertical	60	410	9400	11.5	0.711	Previously modeled- current stack height and manufacturer's data
New Processing East boiler #2	39 EU_08	Vertical	60	335	13952	10.03	0.914	Proposed stack height and manufacturer's data

New East Boiler Exhaust flow rates:

Natural Gas:

Combustion Gas flow: 43,000 lb/hr Per manufacturer data sheet

Density of Air @70°F, 1atm: 0.0749 lb/cuft Env. Engineering reference manual

$43,000 \text{ lb/hr} \div 0.0749 \text{ lb/cuft} = 574,100 \text{ cuft/hr @ } 70^\circ\text{F, 1atm}$

Convert SCF @ 70°F to ACF @ 335°F

$$574,100 \text{ cuft/hr} \times \frac{(460 + 335^\circ\text{F})}{(460 + 70^\circ\text{F})} \times \frac{1 \text{ hr}}{60 \text{ min}} = 14,353 \text{ acfm}$$

#2 Fuel Oil:

Combustion Gas flow: 41,800 lb/hr Per manufacturer data sheet

Density of Air @70°F, 1atm: 0.0749 lb/cuft Env. Engineering reference manual

$41,800 \text{ lb/hr} \div 0.0749 \text{ lb/cuft} = 558,077 \text{ cuft/hr @ } 70^\circ\text{F, 1atm}$

Convert SCF @ 70°F to ACF @ 335°F

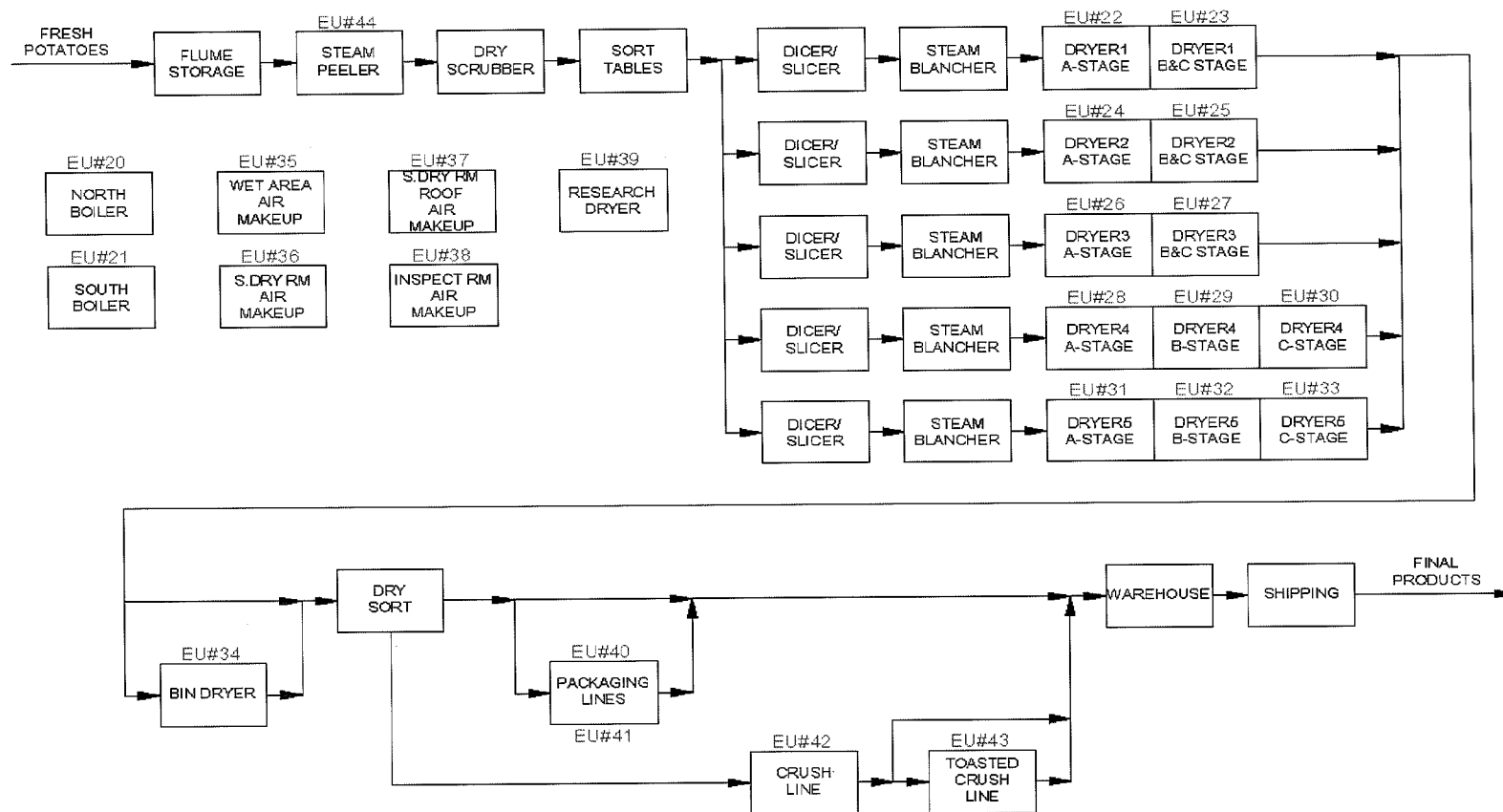
$$558,077 \text{ cuft/hr} \times \frac{(460 + 335^\circ\text{F})}{(460 + 70^\circ\text{F})} \times \frac{1 \text{ hr}}{60 \text{ min}} = 13,952 \text{ acfm}$$


APPENDIX B

PROCESS FLOW DIAGRAM
SCALED PLOT PLAN

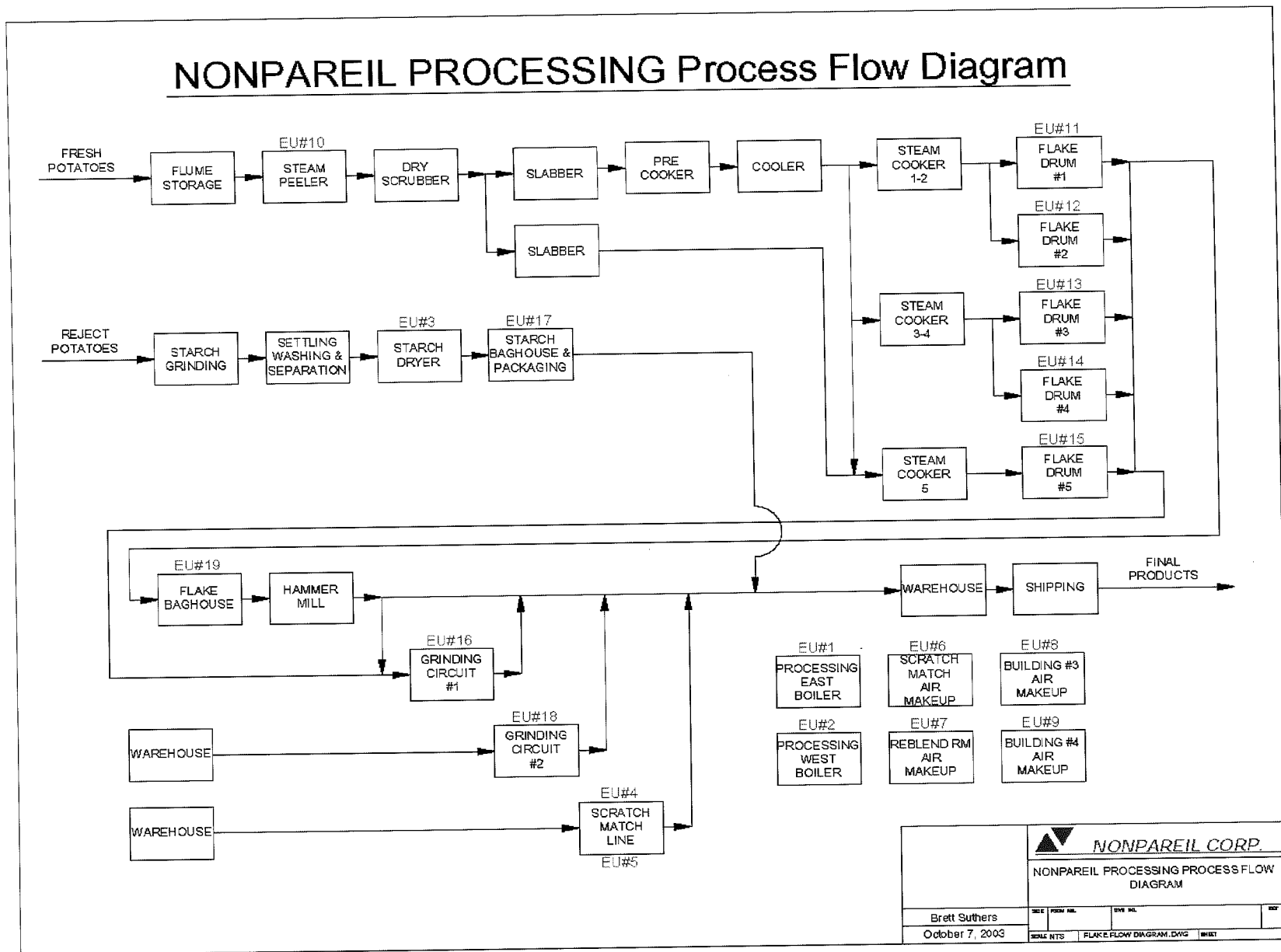
Process Flow Diagram

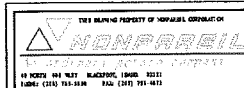
NONPAREIL DEHYDRATED Process Flow Diagram



		 NONPAREIL CORP.	
		NONPAREIL DEHYDRATED PROCESS FLOW DIAGRAM	
Brett Suthers		DATE	REV
October 6, 2003		10/6/03	1.0
		FILE NAME	DEHY FLOW DIAGRAM.DWG
		PROJECT	

Process Flow Diagram (Continued)





PLANE	COORDINATE	DATE	NO	REVISION	DATE	APPROVED BY
PLANE NO. : 001	COORDINATE : 001.00	DATE : 1980	1			
PLANE NO. : 002	COORDINATE : 002.00	DATE : 1980	2			
PLANE NO. : 003	COORDINATE : 003.00	DATE : 1980	3			
PLANE NO. : 004	COORDINATE : 004.00	DATE : 1980	4			
PLANE NO. : 005	COORDINATE : 005.00	DATE : 1980	5			

